

EXHIBIT A

July 20, 2020

VIA EMAIL (gregory.corbett@wolfgreenfield.com)

Gregory F. Corbett
WOLF, GREENFIELD & SACKS, P.C.
600 Atlantic Ave.
Boston, MA 02210
T: 617 646 8000

RE: *Singular Computing LLC v. Google LLC*, 1:19-cv-12551-FDS
Google Answer to Amended Complaint

Dear Counsel:

We write regarding deficiencies in Google's Answer (D.I. 53) to Singular's Amended Complaint (D.I. 37).

As set forth below, Google's Answer contains several denials that violate at least Fed. R. Civ. P. 8(b), which requires "good faith" by any party denying one or more allegations of the complaint, and Fed. R. Civ. P. 11(b)(4), which requires that the denial of factual contentions be warranted on the evidence or reasonably based on belief or lack of information. Despite these requirements, in each of the below examples, Google either answered Singular's allegations evasively or in contradiction of facts that are by all accounts beyond dispute. We thus ask that Google amend its answer in correction of the below examples, or provide its availability for a telephonic meet and confer by no later than Thursday, July 23, to resolve the parties' dispute.

- At ¶ 22 of its Amended Complaint, Singular alleged that it made a number of presentations to Google and/or Google employee Jeffrey Dean between 2010 and 2014. Singular included screenshots from those presentations, each listed under the heading "Singular Presentations Made to Google / Jeff Dean (2010-2014). In its Answer, Google denied the entirety of ¶ 22, including the allegation that Singular gave the presentations from which the screenshots were taken. It is entirely unclear how Google can justify its denial that the presentations to Google took place as alleged, as these facts are indisputable.
- Also at ¶ 22 of the Amended Complaint, Singular included screenshots showing slides and an excerpted transcript of a 2017 talk ("Machine Learning for Systems and Systems for Machine Learning") by Google employee Jeff Dean. Both the screenshots and transcript are listed under the heading "Google Documents" and are alleged by Singular at ¶ 22 to show the "architecture" and "properties and features" of the accused TPUv2 and TPUv3 Devices. Again, Google's Answer denies all of Singular's ¶ 22 allegations. Nevertheless, it cannot be disputed that Google gave the 2017 presentation from which the screenshots in ¶ 22 were taken, made the statements appearing in the excerpted

transcript of Mr. Dean's talk, or that the screenshots of Google's presentation show the architecture, properties or features of the accused devices.

- At ¶ 19, Singular alleged that during its meetings with Google prior to early 2017, Dr. Bates disclosed his computer architectures and prototype to Google's representatives. Google responded to that allegation by admitting that "Dr. Bates discussed computing theory with certain Google employees" and denying "any remaining allegations of [the] paragraph." Google thus denies Dr. Bates ever disclosed his computer architectures or prototype to Google before 2017. Google's denial, however, is contradicted by screenshots, included in the Amended Complaint, showing Dr. Bates' disclosure of his patented computer architecture in presentations given to Google as early as June 2011 and of the details of his prototype in subsequent meetings with Google prior to early 2017.
- At ¶ 15, Singular alleged that "by [Google's] own estimation, Google would have to at least double its computing footprint just to keep up with the increased computer requirements being driven by improved AI-based speech recognition services alone." In its Answer, Google denied this allegation without elaboration. Google's denial is plainly contradicted by at least the following public admissions:
 - In 2017, Google published a paper confirming the above allegation from ¶ 15 of the Amended Complaint.¹ That 2017 paper, titled "In-Datacenter Performance Analysis of a Tensor Processing Unit," was ostensibly authored by at least 76 Google employees.
 - This same allegation from ¶ 15 was also corroborated by Google employee Norman Jouppi, lead author of the 2017 Datacenter paper, in an interview he gave on behalf of Google to Wired Magazine in April 2017.²
 - Google Brain founder and co-author of the 2017 paper Jeffrey Dean gave a public presentation, titled "Machine Learning for Systems and Systems for Machine Learning," in which he confirmed yet again that "Google would have to at least double its computing footprint just to keep up with the increased computing requirements being driven by improved AI-based speech recognition services alone." Singular even included excerpts from the transcript of Mr. Dean's 2017 talk in the Amended Complaint (¶ 22), which confirm the above allegation from ¶ 15.

¹ <https://ieeexplore.ieee.org/abstract/document/8192463/authors#authors>.

² <https://www.wired.com/2017/04/building-ai-chip-saved-google-building-dozen-new-data-centers/>

- At ¶ 25 of its Amended Complaint, Singular alleged that “Google uses the accused TPUv2 and TPUv3 Devices to provide AI capabilities that enhance the performance and efficiency of its Ads platform...as well as its Translate, Photos, Search, Assistant, Cloud and Gmail services.” Google responded by admitting that “it uses some TPU devices to support some Google products” while denying “any remaining allegations in [the] paragraph.” Google’s response to Singular’s allegation is evasive and, more importantly, plainly contradicted by Google’s own public statements on the matter. As Google’s states on its own website, “Cloud TPU is the custom-designed machine learning ASIC that powers Google products like Translate, Photos, Search, Assistant, and Gmail.” Moreover, it is widely known that Cloud TPU refers to Google TPU Versions 2 and 3.
- At ¶ 18, Singular alleged that it met with Google representatives “[a]fter the filing of the provisional patent application,” which occurred in June 2009. Google’s response to Singular’s allegation is similarly evasive, admitting only that Dr. Bates met with Google employees at least three times prior to early 2017. Thus, though it cannot dispute it, Google fails to admit that it met with Dr. Bates only after he filed his provisional patent application in June 2009.
- Finally, at ¶ 20, Singular alleged that Google knew or should have known of the ’273 and ’156 patents prior to the May 2017 launch of the accused Cloud Tensor Processing Unit Version 2. Google’s evasive response, which claims Google is not required to respond to ¶ 20 because it “sets forth argument and legal conclusions” fails to fairly respond to the substance of Singular’s allegation. We therefore request that Google amend its response to clearly state whether it knew or did not know of the ’156 and ’273 patents before the May 2017 launch of the accused Cloud Tensor Processing Unit Version 2.

Please let us know by no later than Wednesday, July 22, whether Google intends to amend its Answer to correct each of the evasive and/or erroneous denials identified above. If Google will not so amend its Answer as to one or more of the above, please provide your availability for the proposed meet and confer on Thursday, July 23. In the meantime, we look forward to your response.

Best regards,

/s/ Paul J. Hayes

Paul J. Hayes

PRINCE LOBEL TYE LLP

One International Pl., Ste. 3700

Boston, MA 02110

T: 617 456 8000

phayes@princelobel.com